

C L A I M S

What is claimed and desired to be secured by Letters Patent is as follows:

1. An underbelly mower adapted to traverse ground comprising:
 - a) a frame having at least one front wheel and at least one rear wheel and adapted to traverse ground in a mowing configuration;
 - b) a mowing deck that is primarily located between said front wheel and rear wheels; and
 - c) a support structure for mounting said deck relative to said frame; said mounting structure including a first forward arm and a second rearward bifurcated arm; said bifurcated arm having a first section that is pivotally mounted on said frame and positioned so that in said mowing configuration said first section is constrained against movement relative to said frame; said bifurcated arm having a second section pivotally connected between said first section and said deck; said first section being swingable away from said deck when moving said deck to an access configuration thereof and said bifurcated arm enabling said mowing deck to swing forward so as

to allow said deck to move between said access and said mowing configuration by swinging of said arms relative to said frame.

2. The mower according to Claim 1 wherein:

- a) said support structure arms in conjunction with a portion of said deck between whereat said arms connect to said deck form a generally parallelogram configuration for operably maintaining said deck in a desired configuration relative to ground being traversed by the mower at various cutting heights, when in said mowing configuration.

3. The mower according to Claim 1 including:

- a) a height-adjustment mechanism cooperating with said support structure; said height-adjustment mechanism including a first member of a hook and a hook capture device suspended from said frame and a second member of said hook and said hook capture device mounted on said deck; said first and second members being selectively engageable to support a rearward portion of said deck so as to place said mower in said mowing configuration and

disengageable so as to allow said deck rear to be swung downward and forward to the access configuration thereof.

4. The mower according to Claim 3 wherein:

- a) said height-adjustment mechanism includes a pivot rod mounted on said frame and having an operator control arm extending radially therefrom;
- b) said first member of said hook and hook capture device being mounted on and radially spaced outward from an axis of rotation of said pivot rod so as to allow an operator to control cutting height by rotating said rod between various cutting height positions; and
- c) said first member also disengaging from said second member when swung downwardly and rearwardly into a non mowing configuration.

5. The mower according to Claim 4 wherein:
 - a) said first member comprises a bar mounted on spacing arms extending radially outward from said pivot rod and said second member comprises at least one hook mounted near a rearward portion of said deck.
6. The mower according to Claim 5 wherein:
 - a) said pivot rod is blocked from movement to said non mowing configuration by a manually disengageable stop when the stop is engaged.
7. The mower according to Claim 6 wherein said stop is a pin and further wherein:
 - a) disengagement of said pin operably releases the pivot rod to allow the pivot rod to be rotatable by said operator control arm so as to rotate to the non mowing configuration and so that the first member disengages from said second member for converting the deck from said mowing configuration to said non mowing configuration.

8. The mower according to Claim 1 including:
- a) a fine height adjustment mechanism associated with at least one of said first and second arms.
9. In a mower adapted to traverse ground having a mobile frame, an underbelly mowing deck and a support structure for supporting said deck relative to said frame and including a height adjustment mechanism; the improvement comprising:
- a) said height adjust mechanism having a transversely extending pivot rod that is pivotly secured to said frame;
 - b) a control handle attached to said pivot rod and operably adapted to allow an operator to pivot said pivot rod;
 - c) at least one spacing arm extending radially outward from said pivot rod;
 - d) a first member of a hook and loop device mounted on said spacing arm in spaced relationship to said pivot rod; and
 - e) a second member of said hook and loop device mounted on said deck; said first and second member being sized and shaped so as to operably engage one another as said pivot rod is rotated in a

first direction to raise said first member into engagement with said second member and thereafter control a cutting height of said deck above ground; and as said pivot rod is rotated in a second direction opposite to said first direction, said first member lowers said deck until a preselected point is reached after which said first member disengages from said second member.

10. A mower according to Claim 9 wherein:

- a) said first member is a bail spaced from said pivot rod and said second member is a hook secured to a rearward portion of said deck.

11. The mower according to Claim 9 including:

- a) a position stop that operably prevents said pivot rod from rotating to a point of release wherein said first member disengages from said second member until said stop is operably disengaged.

12. The mower according to Claim 9 wherein:

- a) said pivot rod includes a radially extending stop arm and said position stop includes a pin that is engaged by said stop arm to prevent rotation of said pivot rod to said point of release while in a stop configuration and said pin being operably removable in a non stop configuration to allow transition of said deck from a mowing configuration thereof to an access configuration thereof.

13. The mower according to Claim 9 wherein:

- a) said support structure includes at least one front support arm and at least one rear support arm extending between and pivotally connecting said deck and said frame.

14. The mower according to Claim 13 wherein:

- a) said rear support arm has first and second sections; said first section being pivotally attached to said frame near said front support arm and constrained against movement relative to said frame when said mower is in said mowing configuration, but pivoting away from said frame

to allow said deck to be rotated to said access configuration; said front support arm and said rear support arm forming a generally parallelogram configuration with a portion of said deck located between whereat said front and rear support arms pivotally engage said deck for operably maintaining said deck in a desired configuration relative to the ground being traversed by the mower at various cutting heights, when in the mowing configuration.

15. The mower according to Claim 14 wherein:

- a) said front support arm includes a pair of laterally spaced leg portions; each of said leg portions being pivotally connected to said deck by a fine length adjustment mechanism.

16. The mower according to Claim 13 wherein:

- a) said front and rear support arms are pivotally connected to said frame so as to be rotatable generally coaxial with respect to one another.

17. A mower adapted to traverse ground comprising:
- a) a mobile frame mounted on wheels;
 - b) a suspension structure supported by said frame;
 - c) a mower deck that is suspended from said frame by a suspension structure with a plurality of cutting blades mounted thereon;
 - d) a height-adjustment mechanism cooperating between said frame and said deck to position said deck;
 - e) a plurality of pulleys mounted on said deck including a tension pulley and a mower blade drive pulley for each cutting blade;
 - f) a motor mounted on said frame and having a motor drive pulley;
 - g) a single drive belt that is reeved between all said pulleys, so as to follow a route that is generally in a single plane during use in the mowing configuration; and
 - h) said tension pulley being moveable by a manual handle between a tension configuration and a tension release configuration.

18. The mower according to Claim 17 wherein:

- a) tension on said drive belt can be selectively increased or released by said tension pulley by said manual handle; said drive belt being removable by hand from said motor drive pulley when said tension is released so that said drive belt swings free to allow said deck to transition from the mowing configuration to an access configuration thereof.

19. The mower according to Claim 18 wherein:

- a) said tension pulley is mounted on a pivotal arm manipulated by said manual handle; and
- b) said manual handle has an over center lock position to secure said tension pulley in a tension producing position.

20. A mower comprising:

- a) a mobile frame;
- b) a mowing deck having at least one cutting blade mounted thereon;
- c) a suspension mechanism for suspending said mowing deck beneath said frame; said suspension mechanism including at least one front support arm and at least one rear support arm; and
- d) a fine adjustment mechanism pivotally joining a selected arm chosen from said front support arm and said rear support arm to an attachment chosen from said mowing deck and said frame; said fine adjustment mechanism including a slideable mount that is secured to said attachment and pivotally attached to said selected arm; said mount being constrained to allow movement thereof from front to rear only under control of an operator to allow fine adjustment modification of the angle of the selected arm relative to the attachment.

21. The mower according to Claim 20 wherein:
- a) said mount comprises a first clevis mounted on said deck to allow selective movement relative to said deck from front to rear; said first clevis being pivotally joined to said support arm by a pivot pin.
22. The mower according to Claim 21 including:
- a) a second clevis fixedly attached to said deck and at least partially surrounding said first clevis; said second clevis having an elongate front to rear slot for receiving said pivot pin.
23. The mower according to Claim 22 including:
- a) a bolt secured to and extending rearwardly of said first clevis; said second clevis having a pass through aperture for receiving said bolt; and an adjustment nut located rearwardly of said aperture on said bolt adapted to allow an operator to adjust the position of the first clevis relative to the second clevis.

24. The mower according to Claim 23 including:

- a) a gross height adjustment mechanism operating in conjunction with said fine height adjustment mechanism.

25. The mower according to Claim 24 wherein:

- a) said gross height adjustment mechanism includes a pivot rod mounted on said frame and having a radially outward extending loop and a radially outward extending operator control handle; said gross height adjusting mechanism further including a hook fixedly mounted near a rear of said mowing deck that is sized and positioned to selectively engage said loop as said pivot rod is rotated so as to allow an operator to engage said hook and loop and then raise or lower said deck.

26. The mower according to Claim 22 wherein:

- a) said suspension mechanisms includes front and rear spaced support arms;
- b) said rear support arm being bifurcated into upper and lower sections; the upper end of each support arm joining to said frame near a common location; and said rear support arm upper section resting against said frame when said mower is in the mowing configuration.

27. The mower according to Claim 26 wherein:

- a) said front support arm and said rear support arm lower sections are approximately the same length and said rear support arm upper section and the distance between whereat said front and rear support arms join to said deck being approximately equal, so as to form a parallelogram configuration for maintaining the deck generally parallel to the ground while in the mowing configuration; and
- b) said rear support arm upper section being swingable free of said frame to allow said deck to transition to said access configuration when said gross height adjustment mechanism is disengaged.

28. A mower adapted to traverse ground comprising:

- a) a frame;
- b) a deck;
- c) a height-adjustment mechanism that is mounted on said frame;
- d) a capture bail mounted on said deck; and
- e) a hook mounted on said height-adjustment mechanism so as to operably engages said bail in a mowing configuration and disengages said bail in an access configuration.